

USPTO Customer No. 25280
Serial No: 10/679,217

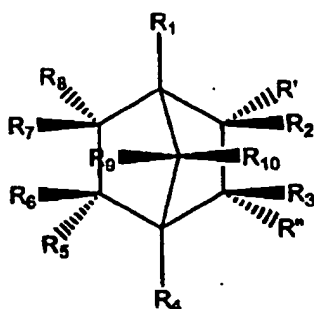
Inventor(s): Mannion et al
Case No: 5646

IN THE CLAIM

1. (Currently Amended) An additive formulation comprising: ~~an anti-caking agent and a small size nucleating compound, said composition further comprising~~

(a) at least one nucleating compound conforming to the structure of Formula (I)

(I)



wherein R₁, R₂, R₃, R₄, R₅, R₆, R₇, R₈, R₉, and R₁₀ are independently selected from the group consisting of hydrogen, C₁-C₉ alkyl, hydroxy, C₁-C₉ alkoxy, C₁-C₉ alkyleneoxy, amine, and C₁-C₉ alkylamine, halogen, phenyl, alkylphenyl, and geminal or vicinal carbocyclic having up to nine carbon atoms;

wherein R' and R'' are the same or different and are individually selected from the group consisting of hydrogen, C₁-C₃₀ alkyl, hydroxy, amine, polyamine, polyoxyamine, C₁-C₃₀ alkylamine, phenyl, halogen, C₁-C₃₀ alkoxy, C₁-C₃₀ polyoxyalkyl, and esters; and

wherein said nucleating compound is provided in the form of particles, said particles having a D95 size range of less than or equal to about 94 micrometers at a mean volume diameter (MVD) of about 16; and

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selected from the
 (b) an anticaking agent, said ~~wherein said~~ anti-caking agent comprising ~~es~~ one or more
~~of a~~ group consisting of: silica gel; talc, dihydrotalcite, and metal carboxylates ~~acids~~;
 and

wherein said anticaking agent is provided in a weight ratio of anticaking agent to
 nucleating compound of from about 10:90 to about 30:70.

2. ⁸ (Currently Amended) An additive formulation, wherein said additive formulation

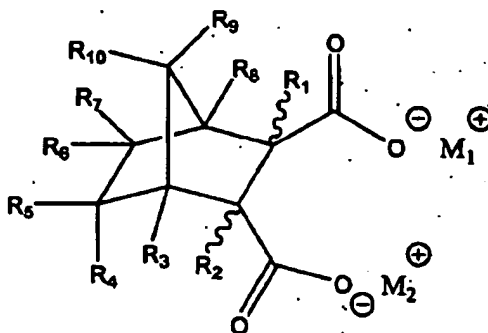
comprises in part;

(a) -an anti-caking agent and

(b) a ~~small size~~ nucleating compound, wherein

said ~~small size~~ nucleating compound conforms ~~ing~~ to the structure of:

Formula (II)



wherein M₁ and M₂ are the same or different and are independently selected
 from the group consisting of metal ~~or organic~~ cations; and

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R₁, R₂, R₃, R₄, R₅, R₆, R₇, R₈, R₉, and R₁₀ are independently selected from the group consisting of hydrogen, C₁-C₉ alkyl, hydroxy, C₁-C₉ alkoxy, C₁-C₉ alkyleneoxy, amine, and C₁-C₉ alkylamine, halogen, phenyl, alkylphenyl, and C₁-C₉ carbocyclic wherein said metal cations are selected from the group consisting of calcium, strontium, barium, magnesium, aluminum, silver, sodium, lithium, rubidium, and potassium.

wherein said nucleating ~~or~~ compound is provided in the form of particles, said particles having a D95 size range of less than or equal to about 94 micrometers at a mean volume diameter (MVD) of about 16; and

wherein said anti-caking agent comprises one or more ^{selected from the} ~~of a~~ group consisting of: silica gel; talc, dihydrotalcite; and metal carboxylates acids; and

wherein said anticaking agent is provided in a weight ratio of anticaking agent to nucleating compound of from about 10:90 to about 30:70.

3. (Cancelled)

4. ² (Currently Amended) The additive formulation of Claim ¹ ~~2~~ 3 wherein said metal cation is calcium.

5. ³ (Currently Amended) The additive formulation of Claim ¹ ~~3~~ 4 wherein said metal cation comprises sodium.

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6. (Cancelled).
7. (Cancelled)
8. (Cancelled)
9. (Cancelled)
10. (Cancelled)

AK
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~~11.~~ ⁹ (Previously Amended) The ^{additive} formulation of Claim 2 wherein said anticaking agent comprises a silica gel.

~~12.~~ ⁷ (Currently Amended) A thermoplastic article comprising the additive formulation of Claim 1, said article further comprising at least one polyolefin.

~~13.~~ ¹² (Currently Amended) A thermoplastic article comprising the additive formulation of Claim ~~2~~ ⁸, said article further comprising and at least one polyolefin.

14. (Cancelled).

15. (Cancelled).

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~~16.~~ ⁴ (Previously Amended) The additive formulation of claim 1 wherein said ~~small~~ nucleating compound comprises disodium bicyclo [2.2.1] heptane-2,3-dicarboxylate.

~~17.~~ ¹⁰ (Previously Amended) The additive formulation of claim ~~11~~ ⁹ wherein said ~~small~~ ~~size~~ nucleating compound comprises disodium bicyclo [2.2.1] heptane-2,3-dicarboxylate.

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18. (Cancelled)

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19. (Cancelled)

20. (Cancelled)

21.⁵ (Previously Presented) The additive formulation of claim 1 wherein said particles comprise a D95 size of less than or equal to ~~about~~ 10 microns at a mean volume diameter (MVD) of about 7.5.

01-07-2005
22.⁶ (Currently Amended) The additive formulation of claim ~~21~~⁵ wherein said anticaking agent and ~~small size~~ nucleating ~~or~~ compound are provided in a ratio of nucleating ~~or~~ compound to anticaking agent of about 80:20.

23.¹¹ (Currently Amended) The additive formulation of claim ~~21~~²⁸ wherein said nucleating ~~or~~ compound and anticaking agent are provided in a ratio of nucleating ~~or~~ compound to anticaking agent of about 80:20.